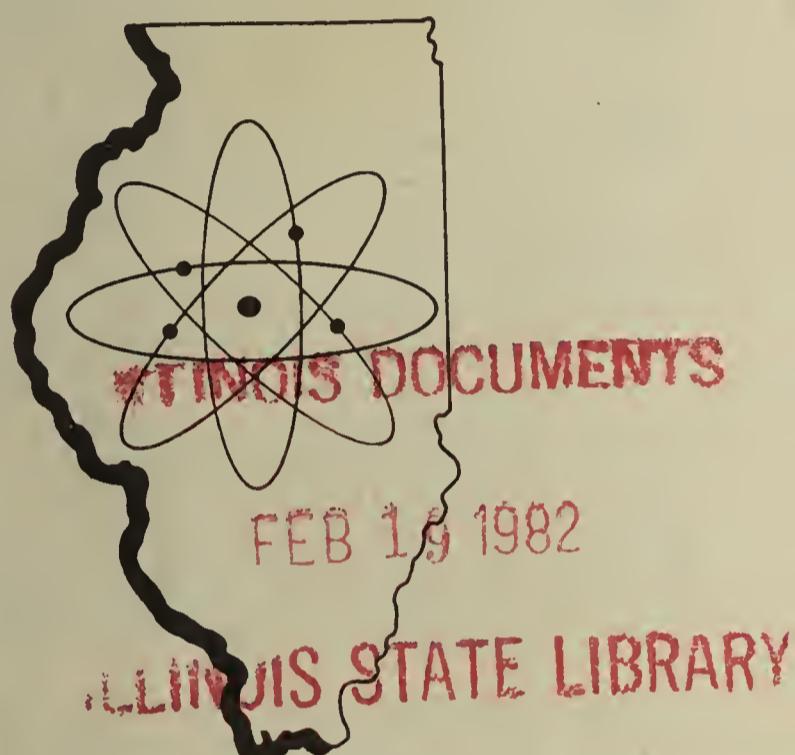


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Introducing the ...

# ILLINOIS DEPARTMENT OF



# NUCLEAR SAFETY

Philip F. Gustafson  
Director

Jane A. Bolin  
Deputy Director

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## A Message from the Director

Dear Fellow Illinoisan:

Nuclear energy and the many uses of radiation and radioactivity have become an integral part of American life. Nationwide 12% of our electricity is generated by nuclear power plants; in Illinois more than 20% comes from nuclear power. At the present time coal and nuclear represent the major alternatives to oil and natural gas for the production of electric power. Our state leads the nation in the number of operating nuclear plants and those now under construction. Radiation is used in a variety of industrial, medical and research applications. Radioactive materials are likewise used in medicine for both diagnosis and treatment, in industry for processes and quality control as tracers in research, and in some smoke detectors in the home.

Radiation and radioactivity are somewhat mysterious to most people. Radiation cannot be detected by our senses — nor can many other potentially hazardous agents. Nuclear power depends upon the fission reaction for its energy. The same reaction is the energy source for nuclear weapons. In a nuclear power plant the fission reaction is controlled, and the amounts of fissionable material and their distribution is such that no nuclear explosion is possible. As a nuclear physicist I can tell you that such fears are entirely groundless. Equating nuclear power plants with nuclear bombs is the same as likening a kitten to a lion.

At the same time, we cannot ignore the hazardous nature of radioactive materials in our society. No matter how many safety factors are built into nuclear plants and other nuclear facilities, there is always the potential of an accident. We must be prepared for these eventualities, however slight, and be ready to react effectively to them.

That's the primary reason that Governor James R. Thompson created the Illinois Department of Nuclear Safety (IDNS). He wanted to be sure that Illinois is prepared to deal with nuclear and radiological concerns on an ongoing basis — and not be forced to react to a problem such as Three Mile Island after the fact.

Perhaps the most visible IDNS job is to monitor Illinois' nuclear power plants and conduct drills to assure that we are ready to respond to any emergency that might arise. Working with the state's Emergency Services and Disaster Agency and other state, federal and local emergency units, IDNS has already tested the nuclear response capabilities at each of the four operating nuclear stations in Illinois, and the agency will continue such testing on a regular basis.

IDNS also is responsible for the safe handling, transportation and disposal of radioactive materials within the boundaries of Illinois. Transporting radioactive materials and disposing of low level radioactive wastes in compliance with federal and state law are issues to which the agency is directing its serious attention.

To assure that radioactive materials are handled safely and properly, IDNS licenses and regulates the use of materials in the medical, research, and industrial fields. The department also regulates x-ray equipment and any unnecessary exposure to both patients and employees.

Along with our technical and regulatory functions, I believe that IDNS has a responsibility to provide the public with fast information regarding all aspects of nuclear energy, radiation and radioactivity.

If the Illinois Department of Nuclear Safety can be of any assistance to you in any way, please drop us a line or give us a call.

Sincerely,  
Philip F. Gustafson  
Director

# The Illinois

The Director and his deputy provide the leadership necessary to meet the goals and objectives of Illinois' nuclear safety program. Questions of agency policy and final decisions on all radiological issues are determined by the Director. The Deputy Director advises the Director on all departmental matters, and is primarily responsible for the day-to-day operations of the agency.

Elements working immediately under the Director and his deputy include legal counsel, policy analysis, public and governmental relations, internal audits and administrative assistance.

Three line offices and two support groups form the structure of the Illinois Department of Nuclear Safety. The line offices, which handle day-to-day operations, are as follows:

## OFFICE OF NUCLEAR FACILITY SAFETY

The Office of Nuclear Facility Safety monitors all Illinois nuclear power plants and areas surrounding them to ensure the safe and efficient operation of the facilities and to guard against hazards to the public. Two divisions comprise the office.

**Division of Reactor Safety:** This division monitors the design, construction and operation of nuclear power stations and related facilities. Ongoing activities include design review and frequent inspection of these facilities with particular emphasis on employee safety, radioactive discharges, and proper maintenance of the components of the facilities in compliance with federal and state standards.

**Division of Environmental Monitoring:** This division monitors areas surrounding nuclear power plants and related facilities. The division annually collects more than 2,000 samples of air, water, milk, fish, vegetation and soil from the areas around the facilities. Also, the division is developing an "early warning system" for nuclear plants which will provide immediate notification of federal, state and local officials in the event of emission of radioactive materials from the facilities.

## OFFICE OF RADIATION SAFETY

The Office of Radiation Safety is responsible for the safe and effective use of electronic products which produce radiation. The goal of the office is to eliminate any unnecessary radiation exposure to individuals resulting from radioactive materials. Two divisions comprise the office.

**Division of Electronic Products Safety:** This division registers medical, dental, analytical and industrial X-ray machines and inspects them to assure conformance with applicable laws and regulations. The division also registers lasers. Another important responsibility is the monitoring of workers in these areas for radiation exposure. Training of persons using radiation devices is another part of the division's work, along with limiting the radiation exposure of medical

# Illinois Department of Nuclear Safety

## What it is and what it does

and dental X-ray patients in a manner consistent with effective treatment and diagnosis.

**Division of Nuclear Materials:** This division grants licenses to physicians, hospitals, radiopharmaceutical manufacturers and industry for the manufacture, distribution or use of radioactive materials. After thoroughly reviewing the kind of material involved, its proposed use, and the applicant's training and experience, a license may be issued. Subsequently, the division inspects licensees to assure compliance with applicable laws and regulations. When a licensee stops using radioactive materials, it also is the division's job to decommission such facilities to indicate they are free from contamination and suitable for public use.

### OFFICE OF WASTE AND TRANSPORTATION MANAGEMENT

The Office of Waste and Transportation Management is responsible for the inspection of the handling and disposing of low level radioactive waste and the transporting of all radioactive waste within Illinois. It also is responsible for enforcement of state regulations regarding these activities. Two divisions comprise the office.

**Division of Waste Management:** This division assists in formulating policy for the safe handling and disposing of low level radioactive waste by providing technical input and expertise (handling and disposing of spent fuel and high level waste is the responsibility of the U. S. Nuclear Regulatory Commission). The division also gathers and collects the latest information concerning radioactive waste from technical and governmental sources for use by other state agencies and interest groups. The division is responsible for developing, monitoring and decommissioning low level radioactive waste sites within Illinois.

**Division of Transportation Coordination:** This division is responsible for formulating a comprehensive plan regarding the transportation of nuclear and radioactive materials within Illinois. The division also is charged with the "primary responsibility" for all state regulation of such materials which relate to public health and safety. That responsibility includes overseeing and coordinating the regulatory functions performed by the Illinois Department of Transportation, the Illinois Department of Law Enforcement, and the Illinois Commerce Commission.

The IDNS support offices, which provide technical and administrative expertise to the line offices, are as follows:

### OFFICE OF TECHNICAL SUPPORT

The Office of Technical Support consists of five diversified sections providing the broad base of technical expertise necessary to support all departmental programs. Those sections and their functions are as follows:

# r Safety...

**Emergency Planning:** Responsible for developing, implementing and maintaining the Illinois Plan for Radiological Accidents, a statewide program designed to protect the health and safety of Illinois citizens in the event of a nuclear accident.

**Tactical Support:** Charged with obtaining, operating and maintaining sophisticated nuclear radiation detection equipment, a statewide multi-frequency radio telecommunications network, specialized emergency response vehicles, the agency's automotive fleet and equipment inventory and other logistical support for agency activities.

**Electronic Data Processing:** Responsible for developing, obtaining, installing, operating and maintaining those EDP resources necessary to support agency programs.

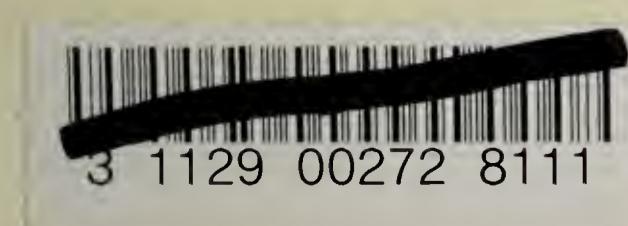
**Radiochemistry Laboratory Services:** Charged with formulating, obtaining, installing, operating and maintaining the nuclear analytical resources needed to support agency activities. This section interprets all data produced by the laboratory and advises other technical staff members.

**Field Operations:** Responsible for coordinating all field activities as mandated by programmatic needs. This section sets priorities and distributes the workload for the agency's eight field offices, determines how field resources are allocated, and serves as liaison between the central office and the field offices.

## OFFICE OF ADMINISTRATIVE SUPPORT

The Office of Administrative Support handles the numerous problems related to the agency's financial requirements and responsibilities and other daily administrative functions. Staffing of the department is a major job of this office — and a particularly difficult one to accomplish in an area as specialized as the nuclear field. The office also must contend with the routine but essential recordkeeping and clerical chores necessary to keep the agency operating smoothly.

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# MISSION

It is the mission of the Illinois Department of Nuclear Safety to protect the citizens of this state from any and all health hazards which they might encounter from the various uses of radioactive materials and radiation-producing devices — whether industrial, medical or otherwise. To accomplish this mission, the Department shall:

- ( 1 ) Inspect and coordinate the regulation of all nuclear power plants in Illinois — whether operating, under construction or in the planning stage — in cooperation with the Nuclear Regulatory Commission. This includes the inspection of pressure boilers within steam-generating facilities.
- ( 2 ) Plan and coordinate appropriate responses to emergencies at nuclear power stations and other nuclear fuel cycle facilities. Plan and coordinate appropriate responses to accidents elsewhere which involve radioactive materials or radiation-producing devices.
- ( 3 ) Oversee employer monitoring of all employees subject to radiation exposure.
- ( 4 ) Establish and implement a remote monitoring system capable of identifying and quantifying the radioactive components of all effluents from nuclear power stations.
- ( 5 ) Study the impact and cost of nuclear power compared with alternative sources of energy, the potential effects of all radioactive emissions on the public health and safety, and all other factors which bear on the safe use of nuclear power. Formulate a general state nuclear policy based on these findings.
- ( 6 ) Regulate and inspect medical and industrial facilities using radiation-producing equipment (primarily X-ray machines) or radioactive materials.
- ( 7 ) Supervise and regulate low level radioactive waste generated within the state and serve as the cognizant state agency in regard to the management and disposal of high level radioactive waste produced in Illinois, including commercial spent nuclear fuel.
- ( 8 ) Oversee and coordinate the transportation of radioactive materials within the state.
- ( 9 ) Register all laser systems within the state. Seek authority to regulate all non-ionizing devices.

It is the policy of the Department of Nuclear Safety to fulfill these duties with the highest degree of technical, legal and social responsibility and expertise in order to accomplish this mission. The department's mandate is to deal effectively with the entire spectrum of nuclear and radiological issues working with federal, local and other state agencies to keep the public informed and protected. In that respect, the Department shall work within the governmental system to assure effective performance and coordination of efforts on an ongoing basis throughout the nuclear and radiological safety field.

# I-D-N-S

## *offices and phone numbers*

Here's how to reach the Illinois Department of Nuclear Safety by mail or telephone:

### **Headquarters**

Illinois Department of Nuclear Safety  
1035 Outer Park Drive  
Springfield, Illinois 62704  
217-546-8100

### **Field Offices**

#### **Region 1A**

4302 North Main Street  
Rockford, Illinois 61105  
815-987-7511

#### **Region 1B**

5415 North University  
Peoria, Illinois 61614  
309-691-2200

#### **Region 2A**

245 West Roosevelt Road  
West Chicago, Illinois 60185  
312-293-6805

#### **Region 2B**

5813 Elm Street  
Berkeley, Illinois 60162  
312-449-1160

#### **Region 3B**

2125 South First Street  
Champaign, Illinois 61820  
217-333-6914

#### **Region 4**

Cottonwood Road  
Edwardsville, Illinois 62025  
618-288-5786

#### **Region 5**

2209 West Main Street  
Marion, Illinois 62959  
618-997-4371

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Illinois Department of Nuclear Safety  
1035 Outer Park Drive  
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